COFFIN (A) & GEDDINGS (W. H.)

Aiken.

CHARLESTON, S. C.
WALKER, EVANS & COGSWELL, PRINTERS,
Nos. 3 Broad and 109 East Bay Streets,
1872.

With compliments of

W. H. GEDDINGS, M. D

Aiken and its Climate;

BY

AMORY COFFIN, M. D., AND W. H. GEDDINGS, M. D.

Man nennt als grösstes Glück auf Erden
Gesund zu sein.
Ich sage nein.
Ein grösser's ist gesund zu werden.

(INSCRIPTION ON STATUE OF HYGIEIA.)

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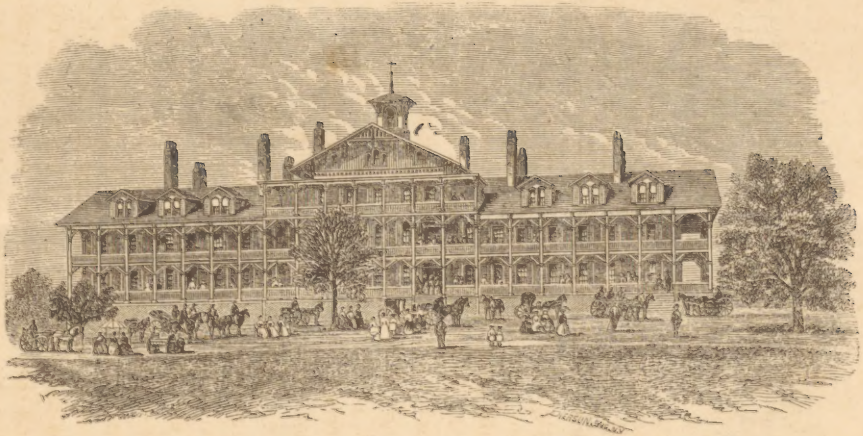

Aiken and its Climate.

The successful and gratifying results which attended our efforts three years ago, to introduce to the knowledge and notice of physicians and invalids the peculiar characteristics of the climate of Aiken, its beneficial results in asthenic diseases, particularly pulmonary complaints, and especially Phthisis Pulmonalis, have induced us to repeat them, and to confirm what we then stated by later observations of our own, and the conclusions of others of high authority, as to the climate best suited to the amelioration and cure of invalids suffering from this class of disease. Since the publication of our first issue, the number of persons visiting us during the winter months has been more than doubled, and we have been highly pleased to find the position we then took strengthened by more numerous observations. To those of our readers who have never visited us before, we propose in the following pages to perform the role of master of ceremonies of yore, and make them acquainted with our little town and its surroundings, its history and present condition, and then, as physicians, we will endeavor to show them what long experience and investigation should lead us to expect from climate in its different varieties, how this experience has been confirmed or modified by more recent researches, to explain to them the peculiar

character of our own climate, and let them infer, with, perhaps, the assistance of their medical advisers, what good they are likely to derive therefrom.

In composing the latter part of our work, we have also wished to interest the attention of those of our medical brethren, whose peculiar avocations, perhaps, have not led them to pay the subject that regard which our constant contact with it and our conviction of its importance force upon us.

In directing our remarks more especially to the influence of climate on Phthisis, we do not wish to be understood as confining its good effects to that disease, as it is equally beneficial in many others, which are either pulmonary in their seat, or asthenic in their nature, such as chronic bronchitis or pneumonia, catarrhs of various kinds, and slow convalescences from acute diseases,—those convalescences which are so imperfect as never to obliterate the stamp of the original disease, if left to accomplish themselves under unfavorable circumstances; but we have dwelt more on this disease because of its great and rapidly increasing prevalence, the great interest consequently attached to it, and our convictions that we possess here a combination of circumstances constituting a climate calculated to influence beneficially a large majority of consumptive cases, a climate which, we will venture to assert and endeavor to prove, is unsurpassed, at least on this continent, by the good effects it produces in very many cases, in some of them perhaps only prolonging life, in others effecting a restoration to that most blessed condition, Health.

History.

It may be interesting to go back a few decades and recall the history of our little town. In 1829, the Charleston and Hamburg Canal and Railroad Company, the first to introduce the locomotive on the American continent, obtained a charter for the purpose of building a railway from Charleston on the seaboard, to Hamburg, at the head of navigation of the Savannah River.

In avoiding the streams, a rather circuitous route was followed, which brought the road to the head of the water-shed, between the Savannah and Edisto Rivers. Thence, to reach the banks of the river, it was at that time thought necessary to descend a steep incline by means of a stationary engine.

The dry, sandy plain at the top of this incline was deemed a suitable situation for a town, merely regarded in the light of a trading place, for the purchase of the moderate quantity of cotton and corn produced in the neighborhood for shipment to Charleston, which previously took the long way of Augusta, and down the river to Savannah.

In order to further this plan the owners of the land, with sagacious foresight, granted a quantity of it to the company, provided a depot should be established there. In 1833 the town was laid out, and named by the company AIKEN, in honor of William Aiken, its first President.

The hopes of the projectors were soon realized. Houses were built and stores were opened, which carried on a flourishing trade with the farmers and planters of the country.

As a mere place of business Aiken continued to prosper until the year 1837, when it met with a series of reverses from which it did not recover for many years. In that year nearly the whole of the business portion of the town was consumed by fire. Only one or two stores were left, and these were fully equal to supplying the wants of the neighboring planters and farmers who had become impoverished by the extensive financial disasters of those days. It was not indeed until the sanatory nature of its climate became gradually known that it commenced its work of recuperation. It was at first resorted to in summer by invalids from Charleston and the sea-coast. The marked beneficial influence exercised by its dry, tonic air on those suffering from affections of the lungs, and on convalescents from long, tedious diseases, soon made it a resort for such. There are several of our most prominent and useful citizens who are still alive, who seemed to be rescued from imminent death by its preservative effects. About 1845 or 1846 an effort was made to bring its virtues to the knowledge of the Northern public, as a great want was felt for a place of resort possessing more tonic properties than the mild but debilitating climates of Cuba and Florida. The more consumption is acknowledged to be a disease of general debility, and not one of mere local import as affecting the lungs, the more importance will be attached in the selection of a sanatory climate, to the dryness and tonic action of the atmosphere, than to mere warmth and mildness. Until the breaking out of the war, Aiken was becoming more and more a place of resort for invalids from the North in winter. Since the restoration of peace it has had again to make a name for itself, and this it seems to have done very rapidly, as the number of visitors has increased very largely every year.

In the winter of 1869–'70 a little over 800 names of visitors were registered; in that '70–'71 the number reached to 1,200, whilst in '71–'72 they exceeded 1,600.

In former days Aiken was the resort of two sets of visitors; wealthy planters from the coast districts found it a pleasant and convenient refuge from the malaria of the plantations, and built their summer cottages on choice situations, within a mile or two of the village, and no sooner had the frosts of autumn allowed them to return to their country homes than the tide of pulmonary invalids from the North set in; but the "wealthy planter" has become a personage of history. The planter of the day has become too straitened in circumstances and too hard working to afford himself a recreation and a retreat. The North and Northwest furnish us with by far the largest majority of visitors. These have become, however, so numerous that a large increase of accommodation has become necessary. Two extensive hotels, and a great number of private boarding houses, well kept and obtaining their supplies of food and delicacies from the markets of Augusta, Charleston and New York.

Position and Appearance.

In order to make our readers better acquainted and more at home with us we may now proceed to describe the position and appearance of Aiken. It is a town of some 2,000 inhabitants, and county seat of the lately created county of the same name. It is situated on the most Northern point of the South Carolina Railroad, 120 miles northwest from Charleston, and nearly six hundred feet above the sea-level. The rise is so

gradual that it is imperceptible to the traveller who is only sensible of breathing a drier and purer air as he recedes from and rises above the sea-shore.

Having attained this height, the highest point on the South Carolina Railroad, the road then descends more rapidly towards Augusta on the Savannah River, going down three hundred and forty feet in the course of seventeen miles. Between Aiken and Augusta the traveller passes in sight of the flourishing factory town of Graniteville, through the more recently founded mills and village of Langley, and the paper manufactory at Bath, which is also the shipping station for the Kaolin works. Not only is porcelain ware sent hence, but very large quantities of the crude Kaolin earth, which is also extensively used at the North in the preparation of paper. An occasional visit to the busy City of Augusta, on the Georgia side of the river, is a pleasant diversion to the invalid.

The railroad, in passing through Aiken, enters a deep cut just above the town, and does not emerge from it until it has passed it, so that the tourist does not obtain more than a glimpse of the houses, even from the depot or station house, situated at one extremity.

In order to make our survey of the town, we will commence from the depot with our visitor and proceed upwards until we reach the so-called *village* which is the nucleus of the *town*.

Hotels and Livery Stables.

Right opposite the station house is the Aiken Hotel, a light, pleasant-looking building, with its long double verandas, or piazzas, as they are called here, running along the whole front of the house, and giving it a

very Southern look. This house is able to accommodate ninety guests.

Starting from here we proceed up Railroad avenue, so-called from the railroad having long ago run through the centre of it. On it are situated some of the largest and pleasantest residences of the town.

At the other extreme end of it, seated on the very brow of a hill and commanding an extensive prospect over the neighborhood, is the Highland Park Hotel, kept by Mr. B. P. Chatfield, a native of Connecticut. This is the largest hotel in the place, and even the most inveterate grumbler, the most fastidious invalid could not find fault with its management. Well lighted and warmed throughout, the table abundantly supplied with well cooked food drawn from distant markets, and every attention is paid to satisfying the wants of the guests. Exposed as it is to the South the sun seems to shine with special brilliancy on its broad piazzas of a clear day.

Attached to the Hotel is a good Livery Stable, across the street is another one kept by H. Jordan, and on each side of the Aiken Hotel is one kept respectively by E. Wimberley and John Staubes. These four stables, with their saddle horses and comfortable carriages, are of great importance to the invalids who depend so much on out-door exercise for the regaining of their health and their recreation.

Half-way between the two Hotels is the main street on which are situated all the stores, and where all the trade with the country is carried on. They are well stocked with a variety of goods. The larger portion of the town is situated on this side of the avenue, as the more level character of the ground adapted it better for business purposes; the greater number of

summer residences lie, however, scattered about on the hills and eminences overlooking the more broken ground on the south side.

Religious.

There are five churches for whites representing as many religious denominations. On Richland street the Baptist, the Pastor of which is the Rev. Lucius Cuthbert; the Methodist, served by the Rev. Geo. Griffiths; the Episcopal, the Rector of which is the Rev. E. C. Edgerton. These Churches are on Richland Avenue. On Railroad Avenue, are the Presbyterian and the Roman Catholic. This latter has only recently been finished and dedicated. Besides these, there are two churches for the blacks, a Baptist and Methodist.

Medical.

From the mention of the religious to that of the medical element of the town, the transition is natural, but we cannot be expected to do more than mention the names of the practitioners of the place, as we ourselves are among the number. Drs. W. F. Percival, P. G. Rockwell, John Douglass, Amory Coffin, and W. H. Geddings, constitute the Medical Staff of the town.

The peculiar necessities of the place, containing so many invalids accustomed to the refinements of a scientific practice, induce and oblige our apothecaries, Messrs. Wood & Co., and Mr. W. H. Harbers, to keep on hand a choicer and fuller stock of medicines than is found, as a rule, in small towns.

Those of our visitors who may require their teeth

and dental arrangements attended to, will, we are sure, be quite satisfied with the skill and scientific acquirements of Drs. B. H. Teague and G. McDonald.

Walks, Drives and Amusements.

The more recent observations on Phthisis, carefully conducted experiments, and our own experience, confirm the time-honored prepossession in favor of a life led as much as possible in the open air. While carefully warning our patients against the injurious effects of over fatigue, we would perforce turn every one of them, who was not too weak, out of doors every day that it did not actually rain, and even the weak ones gain strength, inhaling the uncontaminated fresh air, seated under some tree, with nothing over head but the clear sky and the bright sun. But for those who are able to take longer walks, without the much to be depricated over fatigue, the exercise doubtless is beneficial, as improving the appetite and assisting digestion, besides avoiding the injurious effects of the *ennui* inseparable from a monotonous stay in the house. And our climate is above all things remarkable for the rapid drying of the ground, so much so that after the heaviest rains the invalid is not detained at home by the fear of getting his feet wet. We will, for his guidance, enumerate one or two of the pleasantest of these rambles. The first is to the Coker Spring, about fifteen minutes' walk from the Railroad avenue, along a broad, well-travelled road. At the end of his walk, in a pleasant valley, he will find the spring (named after the original owner of the adjacent lands) in an enclosure meant to protect it against the destructive propensities of rambling swine, etc. The water of the spring is simply limpid and

cool, possessing no medicinal qualities whatever, but well charged with fixed air, and containing the slightest trace of soda. Extending his walk for ten minutes longer, the pedestrian comes to the picturesque little valley in which is situated the Calico Spring, so named from the abundance of the beautiful calico bush or laurel, (*Kalmia latifolia,*) which line the steep hill-sides. Following the path up the valley, we reach the pretty little spring, still presenting its natural picturesque appearance, and overhung in the spring by large bushes of azaleas, kalmias, and other flowering shrubs.

A ramble through the pine woods to the north and northeast of the town is rendered pleasant by the peculiar balsamic fragrance of the leaves of the pine trees. A large grove of these pines exists to the west of Highland Park Hotel. Air impregnated with this aroma of the pine is particularly grateful to delicate lungs, and has been lauded from time immemorial as an important adjuvant in the climatic treatment of pulmonary affections.

Those who are geologically curious will find interest in the singular formations and strata laid bare by the railroad cuttings. In the winter the tall evergreen pines predominate over the leafless deciduous trees and shrubs, but, as soon as the spring opens, the woods are full of the greatest variety of wild flowers, giving interesting occupation to the student of botany. Cryptogamous plants are naturally not as abundant, either as individuals or species, as in moister climates; still there are enough of them to reward the collector for his search.

Those who prefer carriage or horseback exercise, can be furnished with the means by any of the aforementioned livery stables, and the neighboring country furnishes

some pleasant rides and drives. The first and shortest of these is the drive to a small and pretty settlement of gentlemen's houses, about two miles from Aiken, on the road to Graniteville. The name of this little burg is Kalmia, and a visit to the highly cultivated terraced grounds and garden of choice flowers of one of the houses fully compensates for the rough up and down hill drive.

Three miles further on, over an equally uneven road we come to Graniteville. Before we reach it, however we must stop for a little while on the top of the Chalk Hill to admire the extensive prospect of the valley of Horse Creek. To the right is a view of seemingly interminable forests of tall pine, with hills in the distance; below us, sleeping placidly in the sunshine, like two small lakes, are the two reservoirs that feed the canal furnishing water power to the mills, and right beneath us, on the banks of the small river, is the manufacturing village. Turning into a road on the left, we are led to the neatly kept cemetary; from the height on which this is situated we see down the valley a far distance towards Augusta, and in the middle ground we perceive the new and active factory, Langley Mills. In the valley below lies the picturesque little town of Graniteville. A lively place it is. The noise of the wheels, the hum of the machinery, the preöccupied business air of those you meet, the regularity and neatness of the streets and houses with their bright flower gardens in front, remind the visitors more of the villages of their Northern home. This factory was founded in 1845, by the late Mr. Wm. Gregg, to whose energy and prudent foresight it owes its long career of prosperity. We feel it necessary to warn those whose lungs are delicate against staying any time in those

parts of the mill where fine particles of lint and dust are floating in the atmosphere. A morning or afternoon spent in a visit to Graniteville is always remembered with pleasure.

On another day our friends can amuse themselves by riding out to Montmorenci Park. A large mansion, beautifully situated, at the commencement of, and overlooking a picturesque valley, dark forest, of majestic pines covering the hills on either side. The burr stone crops out here in great abundance, and is said to be of fine quality.

The nearness of Augusta, (seventeen miles,) and the facility with which it is reached, a train running each way four times a day, makes a trip there a pleasant break in the uniformity of invalid life. The accommodation or local train, which leaves at 7.45 and returns at 5.45, is the one usually taken by those who go there on a pleasure excursion. It is a cheerful, pretty town, Main Street being alive with busy swarms, and the more retired streets, quite broad and well planted with elms, contain houses indicating more than an usual degree of taste and wealth. This is accounted for by the fact of Augusta not having been injured to any degree by the war, and having advanced steadily in prosperity ever since.

A special train to and from Augusta can always be obtained for the sum of twenty-five dollars.

One does not, however, like always and every day to be riding and driving about the country. To those who prefer staying at home, or when the weather does not permit these excursions, the Aiken Club offers the hospitalities of their reading-room and billiard tables for a certain time. Any stranger can be admitted on application to one of the Executive Committee.

There he will find papers from different parts of the United States. Magazines from New York, Boston, etc. A register is kept where he can ascertain what strangers are in town and where they are staying, and he can make pleasant acquaintance, both among his fellow visitors and the residents of the place. Besides these sources of entertainment, there has been formed a committee with a definite purpose of amusing the visitors and making their time pass more pleasantly. This "committee for the promotion of amusements among strangers," was very successful the last season, '71–'72, in bringing forward concerts, races, theatricals, comic operas, tournaments, etc., participated in by both strangers and residents, and equally enjoyed by both.

Invalids, Consumption, Climate.

And now having indulged in this chat about ourselves; having tried to make our readers better acquainted with us, we would beg those of them who are invalids, or who wish to acquire information on the subject, to accompany us while, in a more serious mood, we turn the conversation on themselves, and endeavor to explain to them the light that the most recent investigations have thrown upon the nature of their affection, what advances science has made in opposing and retarding its progress, and what beneficial effect they may expect from our peculiar climate.

From its universal prevalence throughout the world, sparing neither age nor sex, respecting neither class nor condition, seizing with unpitying impartiality the young and the old, the princely merchant and the poor mechanic, the beautiful drawing-room belle and the humble factory girl, but electing for its favorite victims

the brightest and most interesting members of a family, the question of the nature and treatment of *Consumption*, has, perhaps, engaged the attention of physicians more generally than any other in the whole domain of medical science. Its prevalence may be determined by statistics showing the rate of mortality in proportion to the population and to that from other diseases. Thus we find that one-seventh of all the deaths throughout the world are due to Consumption. In the United States, in the years 1859–'60, the number of deaths from Consumption was 49,082, being in the proportion of 13.79 per cent. to that from all other diseases. These numbers give us some idea of the enormous amount of those who are attacked by the disease, and have very naturally directed the attention of medical men to the ascertainment of its nature, and the discovery and application of some specific remedy for its cure. For centuries back, every few years some new Archimedes starts up, and cries out to all the people, "I have found it," and for awhile the people believe him, and miraculous cures are effected and published to the world. But alas! the new remedy fails to stand the test of time and of crucial scientific examination. Undaunted by their failures, medical men still continue their endeavors to combat the insidious foe. Experiment upon experiment is tried with the hope of discovering some specific capable of arresting its terrible march. But as far as internal drug-medication is concerned, but little has been done, and, in this respect, we are to-day nearly as powerless as we were a hundred years ago. We would not make this confession without much mortification, if we could not, with some degree of gratification, point to the results obtained by the more philosophic application of other

agents, and a more judicious selection of the particular climate suited to each case, which promises to replace the indiscriminate sending abroad, or "going South," which has so injudiciously obtained hitherto. In order to determine what climate is best adapted to the restoration of an invalid from any particular disease, it is but natural that we should commence our inquiry as to the localities in which that disease is least prevalent among the native population, and to ascertain what conditions procure for them that exemption.

In applying this process to the disease in question, our investigations show it to be universal, with the single exception to prove the rule. Wherever man is, there is Consumption, but in varying quantity. These variations occur sometimes to a great degree in situations not very remote from each other. Thus in Genoa, for instance, the disease is so prevalent that four-fifths of all bodies examined after death were found to contain evidences of Pulmonary Consumption.* In Nice, on the other hand, situated on the same coast, only a few miles to the southwest, it is so rare that consumptive patients are sent there to spend the winter months from all parts of Europe.

It is proposed, in the present pages, to present a short *resume* of the medical geography of Consumption, and of the influences which are most active in giving rise to it, and thus enable the reader to form some idea of the climate which affords him the best chance of recovery, or, at least of a prolongation of life.

In preparing the following statistics, the writers have been careful to select only such as are vouched for by the best and latest authority, and cheerfully

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*Descrizzoni di Genova. 1846.

admit that they have drawn extensively on Professor Hirsch's admirable book on Medical Geography,* a work which has not yet been translated into English, and is, consequently, beyond the reach of many of their readers.

In treating of climate we have to take its three elements into consideration, viz: 1st. Temperature, or thermometrical range; 2d. Dryness or moisture, or hygrometric condition; and, 3d. Equability, or sudden variations in thermometric and barometric indications; and we propose to consider the effect of each of these in its turn, both in the production of the disease in question and on its course when once generated.

1st. Temperature.

Believing that his complaint originates in exposure to a low temperature, as in many cases it doubtless does, the pulmonary invalid instinctively seeks relief in the warmer climates of low latitudes. Feeling keenly on the sensitive surface of his air-tubes the cutting effects of the cold Northern air, and with the hopefulness inherent in his disease, he is firmly convinced that if he could breathe for a season the warm breezes of the South, never mind where, he would get quite well. And we can imagine the astonishment with which the bold adventurers who first sought health in the dry, cold, bracing air of Sweden and Norway, Canada and Minnesota, and often found it too, must have been regarded.

But medical geography proves conclusively, by its statistics, that mean temperature, independent of other

*Handbuch der historisch geographischen Pathologie. August Hirsch. Erlangen. 1862–'64.

conditions, exercises but little influence on the development of Consumption, and that, although generally diffused over the whole globe, it is, as a rule, more prevalent in very warm than in cold climates, and its course much more rapid.

The following tables, extracted from Professor Hirsch's work mentioned above, show very conclusively how little the mean temperature has to do with the frequency of the disease:

Name of Place.	Mean Temperature.	Mortality from Consumption.
Boston	45° F.	3.9 per M.
London	47°	3.7
St. Louis	50° 5′	3.7
Charleston	64° 5′ (1856)	3.8
	59° 5′	

Thus we see that the relative mortality from Consumption is as great in Charleston as in Boston, although the difference in mean temperature amounts to from 14.5° to 19 5°. In Copenhagen the mean temperature is 42.8° F.; at Malta it is 59.8°; and yet the mortality from Consumption in both places is 3.3 per M.

Among the English troops, whether stationed in Newfoundland, where the mean temperature is 37° F., or the Ionian Isles, where it is 55.4°, or at Gibralter, 60°, the mortality is the same, viz: 3.5 per M.

Setting aside from our calculations the injurious effect produced by life in large cities, there is no agent which exercises a more deleterious influence on the course of Pulmonary Consumption than a very high temperature, such as obtains in the tropics. Not only is the disease very prevalent, but its progress, when once developed, is terribly rapid. This is most strikingly the case in the West Indies, on the coast of South America, and in Brazil.

Even on our own continent we have in New Orleans a remarkable example of the deleterious effects of heat and moisture on the development of Tubercular Consumption. The rate of mortality from the disease in that city is estimated at 4.11 per M., and has been rated as high as 6 per M., which is much greater than that of any other city in the United States, and is equalled by that of few places in the world.*

The climate of Florida, so much lauded for its beneficial effects in lung complaints during the winter, appears, from the report of Southgate, to exercise a most injurious influence on the course of the disease during the summer months. Speaking of the influence of that climate on consumptives residing at New Smyrna, and other points on the Atlantic coast, who had contracted the disease at Florida, he says: "In such, the rapid melting down of the tissues of the lung in the warm months, it has been my painful duty to witness in more than a single instance."†

In few places does the disease commit such extensive ravages as in the warm climates of the South Sea Islands. Speaking of these Islands, Comeira says: "Pulmonary Phthisis is very common on the Islands of Tahiti and the Marquesas, in fact throughout the whole of Oceanica. It carries off one-third of the whole population. * * Pulmonary disorganization advances in these countries with fearful rapidity; three or four months are sufficient to lead the patient to the grave. One finds at every step whole families a prey to convulsive cough, young daughters abandoned by their parents, consumptives in every stage reduced to a state of emaciation horrible to behold."

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*Stark. Edin. Med. and Surg'l Journal, No. LXXV, p. 130.
† Med. Statistics U. S. A., 1839–'54, p. 313.

The Sandwich Islands, however, constitute an exception to this statement, for there the disease is by no means common.

Having thus proved that warmth alone is not antagonistic to the production, or to the progress of the disease, when once developed, but that, on the contrary, in many instances, it favors the one and accelerates the other to an appalling degree, we will next proceed to consider what effect the second element, mentioned above, has, viz:

Equability.

Although it is admitted that sudden and extreme variations of temperature are injurious to health generally, and more especially detrimental to invalids, yet it is thought, by those who have paid most attention to the subject, that ordinary changes in the thermometer are rather beneficial than otherwise. Fuller, an eminent authority on Consumption, remarks: "Careful observation, amply corroborated by statistical records, proves incontestibly that the pure air of heaven which God has provided for us to breathe, and the *variations of temperature*, to which, in His all-wise providence, He has seen fit to subject us, are not so noxious or productive of ill health as man in his ignorance has oftentimes asserted. No climate is more variable than ours, (England,) and none certainly is more healthy, as proved beyond dispute by the bills of mortality."* Southgate's opinion is that equability can hardly be considered as the most vital element of climate, the highest degree of physical vigor being attained in strikingly variable climates, the human constitution being adapted to such mutations,

*Fuller on the Lungs and Air Passages, p. 366.

and its powers would languish under the monotonous impression of a uniform temperature for a long time.* Nevertheless, we must allow that *very sudden* changes exercise anything but a favorable influence on the production and progress of Consumption, and that the disease is not only rarer where the climate is equable, but its course is also much less rapid.

But in estimating the influence of sudden changes of temperature we must not leave out of the calculation the consideration that they are usually combined with a humid state of the atmosphere, and that, on the other hand, in places which possess an equable temperature a low dew-point obtains, indicating a dry state of the atmosphere; and this leads us to the consideration of the third, and, as we consider it, the most important element of climate, viz:

Dryness or Humidity.

Nowhere in the domain of meteorology do we find an agent more potent in the production of Pulmonary Consumption, or one which exercises a more deleterious effect upon its progress, than moisture. On looking over statistical reports from various parts of the world we are forcibly struck with the fact of its prevalence along the sea-coast, and its diminished frequency as we approach the interior. On the coast of Africa it prevails extensively, especially at Benin and Biafra, but is almost unknown in the interior of that continent. On the coast of Egypt it is quite common, but diminishes in frequency the further inland we proceed, and disappears almost entirely in Upper Egypt. The same is true of all the parts of the African coast, where accu-

*U. S. Army Med. Stat., p. 312.

rate statistics have been collected. Even Algiers is far from enjoying the immunity ascribed to it, the mortality from Consumption being 2.9 per M., very little below that of Dresden, which is three per M., and of many other European towns. In Europe the same predilection for the coast is observed, only in a less marked degree than on the other continents. In Asia we find it prevailing along the coast of the Red Sea, but look for it in vain in the interior of Arabia. In India it prevails extensively on the coast of Malabar, Cawnpore, and in Bombay.

Our own continent presents a striking confirmation of the statements regarding the baleful influence of moisture. Consumption is quite frequent all along the Atlantic and Gulf coasts, on the shores of our great lakes, and along the course of our larger rivers. Coolidge concludes his statistical report of the diseases prevalent among the troops stationed in Florida with the following remarks: "An examination of the statistics of that disease (Phthisis) for the several regions, in connection with the consolidated temperature and rain-tables, will serve to show in a marked degree the effect of long-continued high temperature, combined with excessive moisture, (high dew-point,) in the production and development of Pulmonary Consumption." U. S. A. Med. Stat., 1839–'54, p. 338.

In Mexico the disease prevails on the coast, but is almost unknown on the high and dry table-lands of that country. Nowhere, however, do we find the truth of the above assertion more fully confirmed than in Central and South America. Here, commencing with Mosquito, we find it prevalent along the coast of Costa Rica, Panama, Colombia, Guyana, Brazil, La Plata, Chili and Peru. In La Plata, where it was supposed

at one time that a Sanatorium for Consumption existed, Dupont found the disease very prevalent. Speaking of Montevideo, he says: "Cést cette affection qui donne en temps ordinaire le plus de morts, et de rapatriesements pour les navires de cette station; la Phthisie ne marche pas, elle galloppe, et telle est cette rapiditè qu'il nést pas permis de rapatrier a temps les tuber culeux; presque tous meurent sans qu il y ait un seul instant de repit." *Notes et Observations sur la Côte orientàle d'Amerique, 1868.*

Our space will not allow us to go into detail as to its relative frequency in different parts of the island world; it will be sufficient to state that, with the exception of Iceland, where the humidity is counteracted by extreme cold, it exists more or less extensively on nearly all of them. We have already shown how fearful its ravages are in Oceanica, and in the West Indies it carries off numbers of the inhabitants, both white and black.

The above facts, which might be indefinitely multiplied, demonstrate to what a great extent the prevalence of pulmonary complaints is due to a humid condition of the atmosphere. We might even go farther and prove how great the difference of its prevalence is between two towns not very far from each other; the one situated on a small lake or river suffering severely from its ravages, while the other, with a drier atmosphere, enjoys almost complete immunity, but this would carry us too much into detail.

Winds.

The winds which appear to exercise the most deleterious influence are those which are most charged with moisture, viz: the east and northeast.

CONFIGURATION OF THE EARTH.

This is naturally not without its influence. We have already had occasion to remark that in those countries where the disease is very prevalent on the coast, it gradually disappears as we ascend the mountains. Those places which are noted for their exemption are high and remarkable for the dryness of the soil. We find confirmatory examples of this in Central and many States of South America. The high plateaus of the Rocky Mountains and the Andes are almost exempt, and tuberculous patients derive great benefit from a residence in these elevated situations. The height that has been found most beneficial is from eighteen hundred to four thousand feet, and even higher. In Natal the Drakenberg range attains an elevation of ten thousand feet, and is crowned by a table-land where the climate is dry, the sun brilliant, and the heat not excessive. Dr. Weber, Physician to the German Hospital, London, in an interesting paper, read before the Royal Med. and Chir. Society, (*Lancet*, August, 1869,) asserts that there is no fixed elevation of immunity for every degree of latitude, but that elevation is influenced by all circumstances affecting the degree of dampness or dryness of the soil, confirming his statements by reference to the important results of Bowditch and Buchanan's researches. He further remarks these elevated localities offer great advantages in cases of early Consumption and tendency to Consumption, in the disposition to Catarrhal Pneumonia, and the results of this disease, particularly the so-called tubercular deposits and the genuine tubercular infiltrations.

EFFECTS OF CIVILIZATION.

Civilization, and its attendant evils, undoubtedly favor the development of tubercular disease. For a long time Consumption was unknown among the Indians and early settlers of our Western States, but as soon as the population increased, and the new comers brought with them the manners and customs of the East, the disease became every year more and more frequent, so that at the present day it is quite as prevalent there as in the other parts of the Union. Among the Bedouins it is almost unknown as long as these people lead their nomadic life in the desert; no sooner, however, do they remove to the coasts of the Red Sea, and "exchange the tent for a house of stone," than they become a prey to the disease.

That the crowding together of many individuals is a fruitful source of Consumption, is proved by the fact that it is in large cities that it finds most of its victims; thus in Edinburg the mortality is 4.8 per M., in Paris 4.1, New York 3.4, and New Orleans 4.11. In Lisbon the disease prevails extensively, while the surrounding country is almost exempt. That this is not owing solely to the enervating influences of city life, but to crowding, may be considered proved by the following facts: The aborigines of New Zealand, who, previous to the arrival of the English settlers, led a wild, roaming life, were found to be comparatively exempt from tubercular disease. It was deemed afterwards necessary to confine them to a certain tract of country, but here, although they were supplied with food, clothing and dwellings, the mortality among them, especially from Consumption, became so great that government found it necessary to remove the

restriction, after which the mortality was greatly diminished. (Powers.)

The effect of the density of population is made apparent by the following tables, extracted from Professor Hirsch's work. Thus in London:

Where the population is 1 to every 32 square yards the mortality from Consumption is 4.2 per M.
Where there is 1 to every 142 square yards the mortality from Consumption is 4 per M.
Where there is 1 to every 173 square yards the mortality from Consumption is only 3.3 per M.

In Ireland the proportion of mortality from Consumption to density of population, is as follows, Leinster making an exception, as Dublin is the main representative of the mortality of that county.

In Ulster, 4,957 inhabitants to square mile, the proportion of deaths from Consumption to total number of deaths...1:8.96
Leinster, 4,685 inhabitants to square mile, the proportion of deaths from Consumption to total number of deaths.....1:6.95
Munster, 4,133 inhabitants to square mile, the proportion of deaths from Consumption to total number of deaths..1:9.83
Connaught, 3,101 inhabitants to square mile, the proportion of deaths from Consumption to total number of deaths..1:11.11
[*Hirsch, vol. 2, p. 85.*

The injurious effects produced by the deprivation of good, pure fresh air are strikingly exemplified in the prison reports from different parts of the world. Of these we will only mention Bailey's reports of the Millbank Penitentiary. Within the space of eighteen years there were 205 deaths, 31 of which were from cholera; of the remaining 174, 75 were due to Consumption. Of 355 discharged on account of disease, 90 were affected with Consumption. Dr. Pietra Santra gives us the following account of the ravages of Consumption in the prisons of France and Algiers: Of 600 prisoners incarcerated in the prison of Nimes, 350 died

of Consumption in a very limited period. Of 27 deaths in the civil prison in Algiers, 17 were from Consumption, and at the Maison Centrale de l'Harrach, in Algeria, 57 out of 153 deaths were due to this disease. The crowding together of troops in barracks is almost as fatal as prison life. The mortality among the infantry of the Guard in England reaches the very high figure of 12 per M. The mortality among troops engaged in active service is inconsiderable. What has been said of prisons and barracks applies, though in a less degree, to cloisters, schools, and factories and other institutions, in which the inmates are compelled to lead a sedentary life.

Clarke, in his Treatise on Pulmonary Consumption, makes the following pertinent remarks: "The effects of sedentary life in all classes and conditions of society is, in my opinion, most pernicious, and there is, perhaps, no cause, not even excepting hereditary predisposition, which exerts such a decided influence on the production of Consumption as the *privation of fresh air and exercise;* indeed, the result of my inquiries leads to the conviction that sedentary habits are among the most powerful causes of tuberculous disease, and that they operate in the higher classes as the principal cause of its greater frequency among females."

The consideration of the other causes of Consumption, such as hereditary predisposition, contagion, etc., does not fall within the range of our work, which professes to treat only of those that are connected with climate, and, therefore, to a certain degree avoidable, avoidable in a high degree by the application of such means as a man's own industry or that of his forefathers, inherited or acquired wealth, places at his disposal.

In the foregoing pages we have principally treated of those influences which are favorable to the production and progress of the disease when once developed, and we maintain that we have proved :

1st. That a very warm climate is more injurious even than a very cold one, and that one of medium temperature is the best.

2d. That sudden changes of temperature are injurious if extreme, but that moderate variations are more beneficial than a monotonous equability.

3d. That the most unfavorable winds are those charged with most moisture, viz : the eastern and northeastern.

4th. That civilization and its attendant evils, comprised in the term *ochlesis*, promote the frequency of the occurrence of Consumption.

5th. Which is a corollary of the previous proposition—that the more crowded a population is, the more prevalent is the disease ; and,

6th. That moisture, whether of atmosphere or soil, is the injurious agent, both in its production and development.

Having thus considered the detrimental influences, we may now turn to the obverse of the medal, the brighter side of the picture ; having shown our invalid what has been injurious to him, it is our duty to point out to him those agencies and climatic conditions which have been proved to be most antagonistic to the origination of his disease, and opposing the most obstacles to its progress. These conditions are naturally the reverse of the preceding ones, and our researches show :

1st. That *dryness* is the *first* attribute of a good climate for consumptives.

2d. That elevated positions are much to be preferred to low levels.

3d. That fresh and pure air is indispensable to the consumptive, and consequently that that climate is best for him in which he is able, without discomfort, to spend the greater portion of his time in the open air, and we wish also to demonstrate that our own climate, while it is free from all injurious agencies, possesses, in a high degree, those qualities which are proved to be beneficial.

Climate of Aiken.

1st.—*Dryness.*

The favorable effects of dryness of air and soil on those affected with Pulmonary Phthisis has long been recognized—indeed, nearly eighteen hundred years ago Galen conceived the idea of treating Consumption on the same principle as he did ulcers on the skin and elsewhere, *i. e.*, by dessication and consequent cicatrization. To effect this he was in the habit of sending his patients to Tabiæ.*

Putting out of consideration for awhile the general effects of a tonic-bracing atmosphere on the whole system, it is but natural to conclude that an air containing a minimum of moisture, and consequently of all those minute impurities which moisture holds in suspension in such abundance, is more healing to a surface of lung irritated by deposit of tubercle or any other cause.

Rest is after all the great healing principle of nature. In a large majority of cases of disease rest to the suffering organ is all that is needed for its restoration to

* De Methodo Medendi, lib. v., cap. xii., Ed. Kuhn.

health. In very many cases if we can procure this, nature will finish the work of restoration. We place a broken limb in that position where the muscles will be most at rest, and nature re-unites the separated bones. An irritated brain we put to sleep, a diseased stomach we rest by abstinence, and it is only reasonable that we should seek to apply the same rational treatment, as far as lies in our power, to the lungs. Therefore, that air which calls for the least exertion on the part of these organs must necessarily offer them the greatest chance of recuperation.

That the climate possesses the essential element of dryness we will now proceed to prove, and, for that purpose, have carefully compiled the annexed meteorological tables principally from observations made and kindly furnished us by the Rev. John H. Cornish, to whom we are also indebted for much other information confirmatory of our own unformularized experience.

The observations on which these tables are based, extend over a period of eleven years, and are complete with the exception of the dew-point, which was not noted for want of a proper instrument; observations taken in previous years, indicate that this is generally low. The difference of temperature between day and night must be very marked before dew is deposited at all. It is even then so slight that it disappears off the grass very soon after sunrise. The atmosphere is so dry that surgical and other instruments, guns, etc., which require so much care in other places to prevent their rusting, may be exposed here for months without sustaining damage.

An exemplification of the dryness of our soil may be found in the fact that our wells have to be dug in some places from 90 to 150 feet deep before water is reached.

Notwithstanding this fact, situated as we are, it is but in accordance with meteorological laws that our fall of rain should reach the average of the Atlantic slope, (see table No. 4,) but the porosity of the earth, composed of a loose, sandy gravel, overlying in varying thickness, a bed of red ferruginous clay is so marked that the water which falls during the heaviest rain dries off in a few hours, thus allowing the invalid to take his usual and necessary exercise and fresh air—the importance of which we propose to show a little further on. Fogs are extremely rare, and the Epiphyte Tillandsia, or tree moss, that unfailing indicator of moisture and malaria, which so gracefully festoons the live oaks of the low country, is entirely absent.

All these facts conclusively prove that our climate possesses in a high degree the element of dryness, which we have shown to be so essential to render a climate negative in the production, and obstructive to the progress of pulmonary disease in general, and Consumption in particular. To this element of dryness we conjoin the other important one of moderate

2d.—*Temperature.*

By reference to the annexed tables, Nos. 1, 2 and 3, it will be seen that our range is not a very extended one, more especially if we exclude exceptional cases as where the thermometer reached, 102° twice and 100° seven times in eight years, and the low temperature of +10°, 12°, 15°, 17°, 19°, each of which was observed but once or twice in eleven years, the usual winter minimum being seldom under + 34°.

Owing to the dryness of the air, evaporation from the skin goes on very rapidly producing a cooling of the surface, and doing away with the feeling of oppres-

sion and debility, which heat produces when accompanied by moisture.

Having given the absolute range of temperature of Aiken, let us now compare it with that of other places, both in the United States and in Europe:

Table showing the difference between the Mean Temperature of Aiken and other places of the U. S.

Mean temperature of	Aiken, is	61°.69	Difference	
"	"	New York,	50°.09—11°.60	colder.
"	"	Boston,	48°.20—13°.49	"
"	"	Portland, Me.,	45°.00—16°.69	"
"	"	Newark, N. J.,	48°.39—13°.30	"
"	"	Philadelphia,	53°.46— 8°.23	"
"	"	Cincinnati,	54°.07— 7°.62	"
"	"	St. Louis,	53°.50— 8°.19	"
"	"	San Francisco,	57°.43— 4°.26	"
"	"	Princeton, Min.,	39°.60—22°.09	"
"	"	Charleston, S. C.,	64°.35— 2°.66	warmer.
"	"	Savannah,	64°.26— 2°.57	"
"	"	St. Augustine,	69°.46— 7°.77	"

Thus, as compared with places in our own country, you will perceive that Aiken, in point of mean temperature, occupies a desirable medium, as a rule not very cold, nor yet hot enough to produce in invalids those unfavorable effects which we have already described as resulting from the depressing influence of long continued high temperature.

We will find next, if we compare it with that of those places in Europe which are most resorted to by pulmonary invalids, that the difference is very slight, all of them coming within a few degrees one way or the other.

This is a point of some importance as it shows that we come between the isothermal lines which long experience has proved to be best suited to invalids. Thus the mean annual temperature of:

Palermo is	62°.70, or 1°.01 warmer	than Aiken.
Pisa,	60°.60, or 1°.09 colder	"
Nice,*	60°.60, or 1°.09 "	"
Venice,	56°.40, or 5°.29 "	"
Madeira,	65°.40, or 3°.71 warmer	"

As most of our guests are in the habit of spending only the six winter months with us, it may be more interesting to them if we select the temperature of the colder half of the year in other places, and compare it with our own during that period.

The mean temperature of Aiken for the cold season being + 51°.63:

That of New York is		35°.40, or 16°.23 colder	than Aiken.
"	Cornish, Me.,	26°.16, or 25°.47 "	"
"	Worcester, Mass.,	31°.95, or 19°.68 "	"
"	Newark, N. J.,	35°.88, or 15°.75 "	"
"	Philadelphia,	39°.30, or 12°.33 "	"
"	Chicago,	33°.88, or 17°.75 "	"
"	Cincinnati,	38°.70, or 12°.93 "	"
"	St. Louis,	40°.11, or 11°.52 "	"
"	St. Paul, Minn.,	21°.51, or 30°.42 "	"
"	Forida,	62°.06, or 10°.43 warmer	"

As before, we will carry the comparison over to that of the most noted resorts for consumptives in Europe, and we obtain the following encouraging results:

The mean temperature for the six colder months of

Nice,† is	46°.35, or 5°.38 colder	than Aiken.
Palermo,	54°.50, or 2°.87 warmer	"
Pau,	49°.26, or 2°.37 colder	"
Pisa,	49°.00, or 2°.63 "	"
Madeira,	56°.00, or 4°.37 warmer	"
Mentone,‡	53°.21, or 1°.68 "	"
Venice,	41°.42, or 10°.21 colder	"
St. Remo,‡	53°.80, or 2°.17 warmer	"
Ajaccio,	57°.20, or 5°.57 "	"
Rome,¶	50°.20, or 1°.43 colder	"

Thus we perceive that Aiken may, in point both of

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*Gsell Fell.

†Bauck. ‡Stiege. ‡Reimer. ¶Valentine.

mean annual temperature and of mean temperature of the colder months, be favorably compared with these well known and highly esteemed localities, leaving for the present for future consideration the advantages it possesses in point of dryness of soil and atmosphere, and consequent suitability for an out-of-door life.

3d.—*Winds.*

In eight years of our observation, the southwest wind, which is the pleasantest, and the one which taxes least the delicate lung, prevailed for thirty-nine months. On the other hand, the southeast, which is so injurious, is very rare, and the east wind prevailed for only twelve months during those eight years. The force of the wind is usually very moderate.

The above-named three qualities combined contribute essentially to the fourth.

4th.—*Ability of the Patient to pass the greater portion of his time in the open air.*

We find the importance of this so forcible and emphatically described in Dr. C. T. Williams' work on the climate of the South of France, that we prefer quoting his words on the subject. Speaking of the advantages of a Southern climate, he says: "The chief of these is the amount of sunshine the invalid enjoys for weeks and even months together, when the sun often rises in a cloudless sky, shines for several hours with a brightness and warmth surpassing that of the British summer, and then sinks without a cloud behind the ranges of the Maritime Alps, displaying in his setting the beautiful and varied succession of tints which characterize that glorious phenomenon of the refraction of light, a Southern sunset. * * * *

Owing to this genial influence, not accompanied, as it is in the most protected of English wintering places, by any sensation of chill or damp, and the chemical effect of which is seen in the tanning of the skin, owing to the freedom of the climate from rapid and constantly recurring changes of frost, rain, mist, and mild weather, *the invalid spends the greatest part of the day in the open air and scarcely knows what confinement within doors means.* The exciting causes of his complaint being removed, and the long spell of propitious weather enabling the full influence of the genial atmosphere to act on his frame, his bodily vigor gradually returns and he finds himself able to enjoy a fair amount of exercise, whether walking, driving or riding in a region in which earth, sea, and sky present to his observation phenomena so varied in form, so brilliant in color, and so wondrous in beauty that an inexhaustible feast unfolds itself to his astonished gaze in the enjoyment of which his attention is withdrawn from the contemplation, and oftentimes the exaggeration of his own complaint, and directed to higher and nobler objects."

To those persons whose systems have been depressed by nervous anxiety and despondency, or whose brain and nerves have been overtaxed, this attraction of the attention towards external objects is of no little importance; while on those who have suffered from too sedentary occupation and overcrowding, the ability to be out in the fresh air, and to take exercise, to imbibe, as it were, sunshine, and draw in health with every breath for so large a portion of the twenty-four hours, exercises very naturally the most beneficial influence.

In Aiken he may enjoy this great privilege in a high degree; the weather is seldom so continuously dis-

agreeable as to confine the invalid to the house for a whole day.

This statement is not made vaguely, or from memory, but is proved by the figures of our Table No. 6, to which we beg leave to draw the reader's particular attention. In this table the six colder months of two years are taken, and the proportion of the day stated which the average invalid could pass out of doors, of the 363 days comprised in this period, there were 268 which he could have spent out of the house, and only 40 when the weather was so bad as not to allow him to go out at all.

5th.—*Elevation.*

As we have already mentioned, Aiken owes much of the peculiar character of its climate to its comparative elevation above the surrounding country. It is the highest point on the South Carolina Railroad. From here the road descends rapidly to Augusta, leaving us on a kind of plateau on the top of a hill. Six hundred feet above the sea-level may not seem a very great height, nor is it absolutely; but then absolute height is not of so great importance as sufficient comparative elevation to ensure thorough drainage and a dry air. This subject of the beneficial effect of a prolonged residence on high levels on Phthisis was brought before the Royal Medical and Chirurgical Society in August, 1868, and elicited a most interesting discussion, to which we have already cursorily referred. As the opinions expressed were those of the highest authorities on the subject in England, we will take the liberty of laying them more extensively before our readers. Dr. Weber described seventeen cases treated by prolonged resi-

dence on "high-level health resorts," and the effect, he says, may be stated as decidedly satisfactory in fifteen, undecided in one, and unsatisfactory in another.

Two of the cases were cured, but, on returning to unhealthy occupations and localities, were seized with fresh attacks, resulting in death. A post-mortem examination showed the healing of the original lesion. It seems that most of the other cases got well, but would have relapses whenever they exposed themselves to the causes of their first attacks. A second and third more prolonged stay on high ground would lead to a more permanent cure. He thinks that these elevated regions "deserve more attention than they have obtained, both as winter and summer resort for pulmonary invalids;" * * * * * "that the tendency to absorption and fibrous transformation or cicatrization of deposits—the result aimed at—is promoted, and the tendency to the breaking down of tissues and formation of cavities, the result to be avoided, is counteracted in elevated health resorts." As confirmatory of this view of the retrogression of convalescence upon exposure to unfavorable circumstances, you will allow us to quote words used by one of us many years ago, when urging upon invalids a more prolonged stay in a healing atmosphere, a view which has been strengthened by the observations of later years, and of which we have examples under our eye at this present moment: "We too often see our Northern friends, after improving during the winter, and attaining a certain degree of health, return home for the summer. The next winter they come back to us a little lower in health than when they first came. This process is repeated several times, and then we either hear of them no more, or that we will not see them again, thus proving that a

Northern summer does not possess the virtues of a Southern climate."*

In accounting for the beneficial action of these high levels, Dr. Weber attributes especial importance to the dryness of the soil and air; the former as permitting to a great degree an out-of-door life; the second ensuring a freedom from foreign admixtures, and also to the presence of a large amount of ozone, which increases the oxidizing power of the air, and so lessens the amount of inspiration necessary to be performed by the weak lung, giving it, to some degree, that rest which we have already spoken of as necessary to a diseased organ.

The inhabitants of large cities, whose health have been broken down by the action of that combination of deleterious influences which we term *ochlesis*, and which results from overcrowding, will be able to experience the revivifying influence, not only of fresh and pure air, but of plenty of it. Our little town is spread over a large area, the population sparse and the houses scattered; so that, while we enjoy many of the privileges of a town, such as proximity to markets and shops, post-office, railroad and telegraph station, we have all the freedom from those impurities which poison the air of a closely-built town.

Tonic Properties of the Atmosphere.

Besides the soothing influence of the atmosphere on the bronchial mucous membranes of the lungs, it has been found to have a most tonic effect on the general system. This is most especially evidenced in the rapid recovery

*Address delivered before S. C. Med. Association by Amory Coffin, M. D., 1852.

from diseases of debility, the stage of convalescence intervening between illness and health, usually so tedious, being, as it were, jumped over. This quality is attributed by Dr. Hartsen to the "exciting and vivifying action of the South." He remarks: "Many a patient who in the North is scarcely capable of walking a quarter of an hour without fatigue, is often able, after his arrival in the South, to take long walks without experiencing the slightest fatigue, and is thus enabled to exercise his lungs in the open air. I have often observed this, and considered it one of the chief advantages of a residence in the South."*

Curability of Consumption.

"But" some sceptical reader will object "although the climate is excellent, and highly beneficial in cases of bronchitis, pure and uncomplicated or pneumonic catarrh, or convalescence from diseases of debility, that your air is pure and easily breathed, your soil dry, your sun bright, and your temperature moderate, you must confess that the most that these advantages can do for a sufferer from genuine Consumption is to prolong his life for a short time at the cost of expatriation, the privation of the precious comforts of home and the society of dear friends." To such we would reply, we confess, no such thing. We could point out more than one person who came among us many years ago with hemorrhages, cough, emaciation and other symptoms of Pulmonary Phthisis, who are not only still alive, but in the enjoyment of very fair health. Some of these cases occurred as long as thirty years ago, and in

*Hartsen, Virchow's Archiv., Band 46, p. 128.

one instance the "retrogression of convalescence," on a return to unfavorable locality and occupation, was very marked. Let us, then, consider the question, *Is Consumption curable?*

As in all sciences, so also in medical knowledge progression is never one of steady advances; but, like the waves of the rising tide, we are sometimes carried nearly back to the point whence we started, then a fresh progression, another falling back, and so on; always gaining, but every now and then checked by coming in contact with one of those apparently insuperable barriers which seem to mark the confines of human knowledge. This truth applies with full force to the above question of the curability of Consumption. In the last century but few physicians would have dreamed of answering it in the negative; and it was only after the invention and application of percussion and auscultation, that the idea obtained that Consumption was an incurable disease, and, owing to the vanity of the age, which induced men to undervalue the truths acquired through the close and accurate observation and experience of the fathers of medicine, became so firmly established, that, ten or fifteen years ago, it would have been considered rank heresy for any medical man to have asserted a contrary opinion. Since that time, however, the old idea of its curability has again revived; and we hope in the present chapter to be able to prove, not only that Consumption is curable, but that such instances of cure are not unfrequent. In the first place, as Waldenburg* justly remarks, it is a mistake to suppose that an individual can have Consumption but once; in the great majority of cases there

*Die Tuberculose, etc., etc. Von L. Waldenburg, Berlin, 1869.

is a repetition of the disease, and the patient frequently looks well and enjoys excellent health in the intervals, the symptoms indicative of the disease disappearing entirely, or when this, from their nature is impossible, remaining in *statu quo.*

It appears somewhat remarkable that this important fact should have attracted so little notice from those who have made a special study of the disease, and yet it is of every-day occurrence, so much so that many even of our lay readers will doubtless recall to mind examples of it.

Without dwelling upon those cases which have come under our observation, which, although they impressed us strongly with the truth of the statement, yet have not been by us, put into notes of sufficient accuracy to make them of any value, we will give a short *resume* of the opinions entertained by some of the most celebrated authorities on pulmonary affections, selecting a few striking cases by way of illustration.

Fuller, from whose work we have already quoted, after calling to mind the fact that tubercle deposited in the external glands may remain quiescent for years, or, what is more usually the case, undergo complete resorption, makes the following remarks: "Thus we are constrained to believe that the same holds good in respect to the lungs, and that whether tubercular deposits in these organs remain quiescent or undergo absorption, or calcareous transformation, or be got rid of by suppuration and expectoration, the patient may recover, or attain to longevity, provided only that his general health be improved, and the condition of his blood altered, so that no fresh deposit of tubercle shall occur."

He mentions three cases of recovery in which ves-

tiges of cavities and of tubercular deposit were found, although the subjects had ceased to show symptoms of Consumption for years previous to their death, and had gained flesh in the meantime. The most remarkable case was that of Mary Liddon, whose mother had died of Consumption, and who herself had been "asthmatic" for years, and had occasionally expectorated blood. When she first applied for relief, in 1849, she presented most of the general symptoms of Consumption. She was pale, somewhat emaciated, with nails bent over, was short-breathed and expectorated a considerable quantity of matter. There was marked dulness and flattening under the collar-bones of both sides, and the evidences of a cavity in the right lung. A tonic plan of treatment was pursued, and after a time the general symptoms began to subside, the signs of the excavation to disappear, and she rallied so rapidly that before the expiration of eighteen months her general aspect was that of good health. In 1858, she died of another disease, and the body was examined, revealing an old scar in the right lung, the remains of the former cavity which had healed. There was only a little old tubercle in the neighborhood of the scar.

Even more cheering is the testimony of the Drs. Williams, who have preserved notes of no less than two thousand cases of Consumption. The following are their words: "Powerless as medicine is in the overwhelming and rapid types of the disease, it has yet considerable influence over the milder forms, and under careful treatment life may be prolonged for many years in comfort and usefulness, and in not very few cases the disease is so permanently arrested that it may be called cured. In six hundred cases there were no less than

fifty-six in which the disease was arrested and the patients lived twenty years and upwards."

This does not include many cases where the disease was checked in its incipiency.

For the sake of encouraging our patients to persevere in the treatment prescribed for them, we will now give a brief synopsis of some of these cases.

"An unmarried lady consulted Dr. W. in 1847—had cough for eighteen months. During the two months previous to her visit, her breath had become hurried, and her flesh and strength had become much reduced. She had no appetite, and had spit up a few mouthfuls of blood. At the time of her visit she was very weak and much emaciated, with quick pulse and profuse night sweats. There were signs of tubercle in more than half of the left side of the chest, and cavities in the same region. Under the treatment instituted, she improved in strength and well being, and had but little cough. She continued to improve, and was married in 1850. In 1867, twenty years after her first visit, and twenty-one and a half from the commencement of the disease, she was alive and well.

"A clergyman, 32 years old, was seen by Dr. W. for the first time in 1846. He had lost four sisters with Consumption. Three years previous to that time he had become hoarse. Cough with expectoration and shortness of breath came on five months before. There were signs of tubercle and cavities in the upper portion of the right side of chest. He was placed under treatment, and for the next two years resided at Minehead, and in parts of Devonshire, Malta, and Pisa. In 1868, he was again seen when he was quite well and active, conducting a large school, could walk, preach and bear

exposure to any extent. The physical signs, dulness, etc., remained, rather to be attributed, however, to the vestiges of his former complaint than to any existing disease, as he had enjoyed excellent health for twelve years."

Dr. James Henry Bennett, in his late work "on the Treatment of Pulmonary Consumption," gives the details of twelve cases, his own among the number, which had been cured, by proper hygienic means.

These well marked cases are but types of what we have not unfrequently witnessed ourselves.

But we agree with Dr. Bennett in his assertion that it requires not only means but character and intelligence to carry out the necessary plan. Among his successful cases he remarks he does not find a single foolish, wilful, obstinate person.

Waldenburg, after dwelling upon the fact that the same individual may have more than one attack of Consumption, makes the following bold statement:

"Viewed in this light, Phthisis is one of the most frequently curable among the diseases which endanger life, and its treatment is often for the physician a most grateful task. Compared with chronic disease of the brain, with nephritis, cancer, etc., how hopeless do these latter appear. It is true that to attain this result, the patient's circumstances must admit not only of his following the medical prescriptions and directions about diet, but also of considerable material sacrifices, such as long journeys, change of residence," etc. (Op. cit.)

Of late years it has been demonstrated by actual experiment that Consumption may be produced in the lower animals by inoculation. During these experiments, which have been carried on very extensively, it sometimes happened that the animals recovered, and

grew fat again. They were afterwards killed, and their bodies examined. In such cases the vestiges of the disease were observed, the tubercular matter having undergone retrograde metamorphosis.

We have thus corroborated our seemingly bold statement of the curability of Consumption by the quotation of the opinions of the most eminent authorities in Europe, and proved the ground of their opinions by the citation of cases most carefully observed by them.

This is certainly most cheering, but such is the hopefulness of disposition which, so strangely, almost invariably accompanies this disease, that it falls much oftener to our lot to be obliged, in mercy, to repress unfounded hope than to inspire confidence. This sanguineness seems to be contagious, for it not only communicates itself to surrounding friends, but influences the judgment of the attending physician. The floating straw is not only caught at by the drowning man, but is cruelly held out to him by those standing on the shore. The unfortunate consequence is that we have too often sent down to us, for our climate to cure, cases which are beyond cure—cases in which the existence of large cavities, profuse suppuration, laryngeal ulceration, colliquative diarrhœa, and other equivalent signs indicate that they have reached that stage whence there are no backward steps towards convalescence.

"It is too sad," as Dr. Pollock remarks, "to sit by such a patient and calculate his chances of life, whether they are sufficient to bear him home again, or whether it is necessary to allow him to breathe his last among strangers."

And now our task is done; we have set forth what we deem, and what others deem to be the essentials of

a curative climate, and we have shown how far our own climate possesses those essentials. In doing this we have endeavored to present an impartial, unprejudiced statement, and we are not conscious of having extenuated or embellished anything.

In taking leave of our readers, those of them who are invalids, we sincerely hope they may realize what, in the words of our motto, is the greatest pleasure upon earth, not to be well, as many suppose, but to get well.

METEOROLOGICAL OBSERVATIONS.

No. 1.

MEAN TEMPERATURE OF MONTHS AND YEARS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
1860	46 74	48.34	53.70	66.60	71.54	76.30	81.83	77.54	72.96	63.56	51.73	39.74	62.54
1861	45.29	49.60	52.80	61.83	69.41	78.66	77.03	74 54	71.66	62 61	53.63	47.67	62.06
1862	49.77	50.42	51.64	61 70	68.64	73.56	75.35	76.38	72.88	61.64	52.25	47.67	61.11
1863	45.03	47.89	51 42	59.33	68.77	73.03	77.70	76.96	68.63	60.45	55.	46.03	60.85
1864	43.16	47.03	50.38	58.30	69.75*	72.33	77.67	77.	72.23	59 29	52.25	48.74	60.93
1865	39.45	46.03	55.57	66.56	70.10	74.96	80.96	76.16	75.53	60.29	52.25	50.48	62.65
1866	45.	46.56	54.41	66.53	68.	74.50	79.80	80.29	75.86	62.29	52.33	42.12	62.30
1867	40.90	54.50	51.83	61.36	68.96	73.56	78.77	75.84	73.80	61.64	56.03	50.74	62.32
1868	47.05*	48.29*	55.80	57.00	69.80	74.10	79.40	76.20	73.10	62.03*	52.25†	42.40	61.44
1869	50.30	49.00	53.30	62.90	67.80	77.40	81.40	79.00	71.20	59.90	47.40	47.10	62.22
1870	49.10	46.60	52.50	64.80	72.90	75.70	82.70	78.80	72.54*	65.30	52.70	43.70	63.11
	47.05	48.29	53.29	62.17	69.75	75.17	79.90	77.41	72.54	62.03	52.25	45.62	61.96

* Interpolation; mean of ten years.
† Interpolation; mean of seven years.

No 2.

HIGHEST TEMPERATURE AT 2 P. M.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
1860.....	71	74	80	91	92	96	102	97	91	82	75	68	102
1861.....	63	73	78	85	95	102	96	93	92	87	77	62	102
1862.....	76	73	80	83	90	92	94	98	89	84	75.70	75	98
1863.....	70	71	74	87	89	90	92	95	88	80	75	66	95
1864.....	74	74	76	85	89.61	93	95	92	90	83	75.70	73	95
1865.....	61	69	75	81	87	92	100	92	91	81	75.70	74	100
1866.....	68	70	77	90	88	92	95	95	89	82	75	66	95
1867.....	73	78	76	82	86	91	93	86	90	85	75	75	93
1868.....	75	64	84	87	87	92	99	90	87	79	79	69	99
1869	68	70	75	84	91	94	101	96	87	76	71	67	101
1870	77	70	73	91	91	92	96	93	87	80	78	75	96
Max.....	77	78	84	91	95	102	102	98	92	87	79	75	102

No. 3.

LOWEST TEMPERATURE AT 7 A. M. OR 9 P. M.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
1860.....	15	22	32	41	45	63	67	64	54	44	22	23	15
1861	29	32	23	45	50	63	65	63	47	42	32	22	22
1862.....	32	32	26	43	53	55	65	61	60	34	30.12†	22	22
1863.....	20	23	28	35	48	62	67	60	46	42	31	25	20
1864	12	18	26	43	50.90*	54	57	65	55	41	30.12†	17	12
1865.....	19	23	38	52	54	62	69	63	61	44	30.12†	28	19
1866.....	23	21	32	39	44	56	64	63	60	40	32	25	21
1867.....	21	22	30	39	51	61	71	65	64	42	32	28	21
1868.....	22	25	32	39	56	63	71	65	50	42	33	12	22
1869.....	32	25	25	34	48	64	68	61	51	36	30	30	25
1870.....	23	15	26	34	60	61	70	70	63	49	29	10	10
Min.....	12	15	23	34	44	54	57	60	46	34	22	10	10

*Interpolated; mean of ten years.
†Interpolated; mean of eight years.

No. 4.

AMOUNT OF RAIN IN INCHES.

	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Year.	Maximum.	Manimum.	Range.
1860	.94	7.58	1.06	2.47	2.54	2.47	4.64	4.20	.86	1.21	2.79	3.11	33.87	7.58	.86	6.72
1861	6.39	4.24	2.89	4.62	3.29	1.31	.55	5.25	1.64	2.18	2.21	1.69	36.26	6.39	.55	5.74
1862	6.21	8.76	3.84	5.25	2.65	6.43	4.53	4.62	2.10	2.76	3.99	4.25	55.39	8.76	2.10	6.66
1863	3.09	5.06	3.92	2.69	3.58	6.28	10.47	4.18	2.55	3.62	3.72	7.33	56.49	10.47	2.55	9.92
1864	1.50	1.43	6.67	2.81	3.99	10.32	1.66	5.66	3.21	5.79	4.01	4.33	51.38	10.32	1.43	8.89
1865	4.49	5.35	6.37	.68	3.05	3.68	7.34	3.70	1.32	1.89	9.67	7.17	54.71	9.67	.68	8.99
1866	1.71	2.24	2.11	7.37	6.04	5.20	5.03	2.50	2 05	1.26	1.62	2.34	39.47	7.37	1.26	6.11
1867	2.36	2.84	6.33	3.82	3.99	11.48	1.23	10.70	4.26	4.26	2.61	2.46	56.34	11.48	1.23	10.25
1868	2.60	3.34	3 31	9.34	6.42	2.46	4.11*	6.40	4.04	3.57	2.89*	2.67	50.55	9.34	2.60	7.34
1869	5.41	6.73	2.58	5.05	1.19	3.72	5.56	5.11	1.79	1.37	2.76	4.58	45.85	6.73	1.19	5.54
1870	2.86	2.77	6.05	6.07*	1.92	8.31	2.36	3.22	0.83	4.40	2.11	1.53	42.43	8.31	.83	7.48
Means	3.17	4.38	4.02	4.04	3.38	4.74	4.11	4.98	2.72	3.09	2.64	3.21	46.70	9.09	1.35	7.74
Maximum	6.39	8.76	6.67	9.34	6.42	11.48	10.47	10.70	4.26	4.40	9.67	7.33	56.49	11.48		
Minimum	.94	1.43	1.06	.68	1.19	1.31	.55	2.50	.83	1.21	1.62	1.53	33.87		.55	
Range	5.45	7.33	5.61	8.66	5.23	10.17	9.92	7.20	3.43	3.19	8.05	5.30	22.62			

*Interpolation ; mean of ten years.

No. 5.

PREVAILING WINDS.

	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Year.
1860..	S.W.	N.E.	S.W.	S.W.	S.W.	S.W.	S.W.	N.E.	S.W.	N.E.	S.W.	S.W.	S.W.
1861..	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	N.E.	N.E.	S.W.	N.E.	S.W.
1862..	S.W.	N.E.	S.W.	N.E.	S.W.	S.W.	S.W.	S.	E.	E.	.....	S.W.	S.W.
1863..	W.	E.	S.W.	S.W.	N.E.	S.W.	S.	S.	E.	N.E.	S.W.	W.	S.W.
1864..	S.W.	S.W.	W.	E.	.....	N.E.	N.E.	S.W.	E.	W.	.....	W.	S.W.W.
1865..	W.	W.	E.	E.	S.	E.	W.	N.E.	E.	N.E.	.....	S.W.	E.
1866..	W.	W.	S.W.	S.W.	S.W.	S.W.	E.	E.	W.	N.E.	W.	W.	W.
1867..	W.	S.W.	E.	W.	S.	E.	S.W.	S.W.	S.	N.E.	N.E.	N.E.	SW.NE.
	S.W.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	E.	N.E.	S.W.	S.W.W.	S.W.

The prevailing wind was from S.W. in 39 months.
" " " N.E. " 18 "
" " " W. " 15 "
" " " E. " 12 "
" " " S. " 4 "

No. 6.

PROPORTIONATE TABLE SHOWING THE TIME THAT THE INVALID MAY PASS IN THE OPEN AIR.

	1870–'71.						1871–'72.						
	November.	December.	January.	February.	March.	April.	November.	December.	January.	February.	March.	April.	Total.
Whole days	22	21	26	18	21	23	20	25	26	20	22	24	268
Three-quarter days	1	2	1	2	2	6	2	1	1	1	3	4	26
Half days	5	1	2	3	3	1	1	...	...	3	3	1	23
Quarter days	...	...	...	1	1	1	...	1	1	1	...	...	6
No part of the day	2	5	1	5	5	...	7	5	4	4	2	...	40

HOW TO REACH AIKEN.

Travellers from the North and East have a choice of three routes, viz: via Washington, Wilmington, N. C., to Augusta, Ga., or via Danville, Va., Charlotte, Columbia, S. C., to Augusta, both all rail and time the same; say forty-eight hours from New York, fare $27 50, meals and sleeping cars extra; about $38 to Augusta. The most desirable, least fatiguing and cheapest route, however, is by steamship from New York to Charleston, thence by rail, 120 miles to Aiken. The steamships of the New York and Charleston line are strictly first class, commanded by seamen of admitted ability, who, being gentlemen and stockholders, carefully watch over the comfort of the passenger, and do not delegate it, as is too often the case, to subordinates. This line has never, since its establishment in 1845, met with an accident; the tables are generously supplied with all the delicacies of the New York and Charleston markets. The sailing days are Tuesdays, Thursdays and Saturdays, at 3 o'clock, P. M., from pier 29, North River; and immediately opposite is the office of the agents, Henry R. Morgan & Co., 177 West street, from whom through tickets can be procured to Aiken or Augusta for $22. This item includes meals, state-room and transfer of person and baggage to the cars of the South Carolina Railroad.* W. Stevenson, a resident of Aiken, is agent of the line at Augusta, and will be happy to furnish all information, and promptly reply to such inquiries as may be addressed to him at his office, 219 Broad street, Augusta, Ga. Time tables of the Northern and Western Railroads will be cheerfully transmitted by him if desired.

Those residing in the Western States, who contemplate visiting Aiken, it is unnecessary to confuse, perhaps, by enumerating the half-score of routes to Atlanta, Ga., the terminal point, and which is 173 miles west of Augusta. The traveller should procure through tickets to Augusta to benefit by a material reduction of fare.

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*The passage is from 50 to 60 hours, averaging 55; frequently it is made in 48 hours from dock to dock.